

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing of claims in the specification.

Listing of Claims:

Claim 1. (**Currently Amended**) A method stored on a computer readable medium including computer executable instructions for automatically generating at least one test for testing a simulation model of a device under test (DUT) in a test environment during a test verification process, the method comprising:

providing a plurality of scenarios, each scenario featuring at least one constraint relating to a relationship with at least one other scenario;

selecting at least one of said plurality of scenarios according to said at least one constraint by resolving conflicts among said constraints of said plurality of scenarios; and

automatically generating the test from said at least one selected scenario.

Claim 2. (**Currently Amended**) The method of claim 1, wherein said selecting comprises: selecting a number of said plurality of scenarios according to

~~said~~ meta-data contained in at least one scenario; and combining said number of said plurality of scenarios to form a combined scenario instance.

Claim 3. (Original) The method of claim 2, wherein at least one selected scenario comprises a sequence.

Claim 4. (Original) The method of claim 3, wherein at least one selected scenario conflicts with at least one non-selected scenario and wherein said meta-data comprises information about said conflict.

Claim 5. (Original) The method of claim 1, wherein said selecting at least one of said plurality of scenarios is performed at least partially according to a configuration of the DUT.

Claim 6. (Original) The method of claim 1, wherein said providing said scenarios is performed during a scenario creation process.

Claim 7. (Original) The method of claim 6, wherein a user performs said scenario creation process.

Claim 8. (Original) The method of claim 1, wherein said providing said plurality of scenarios is performed by a user.

Claim 9. (Original) The method of claim 1, further comprising: generating at least one external file according to said at least one scenario.

Claim 10. (Original) The method of claim 9, further comprising: using said at least one external file at run time for running the test.

Claim 11. (Original) The method of claim 10 further comprising: compiling said at least one external file before said using said at least one external file.

Claim 12. (Original) The method of claim 10, wherein said generating said at least one external file is performed before or concurrently with said generating said test.

Claim 13. (Original) The method of claim 10, wherein said external file comprises an HDL (hardware description language) file for configuring the simulation model.

Claim 14. (Original) The method of claim 1, wherein said generating the test is performed according to an at least partially randomized process.

Claim 15. (Original) The method of claim 14, wherein said randomized process is based upon a plurality of constraints, and wherein said plurality of constraints is provided in said selected scenario.

Claim 16. (Original) The method of claim 1, wherein said generating the test is performed according to said at least one constraint.

Claim 17. (Original) The method of claim 16, wherein each constraint defines a type of expected input variable and a type of operation to be performed on said type of expected input variable.

Claim 18. (Original) The method of claim 17, wherein said constraint comprises a static constraint on a value of said type of expected input variable.

Claim 19. (Original) The method of claim 17, wherein said constraint comprises a dynamic constraint on a value of said type of expected input variable.

Claim 20. (Original) The method of claim 17, wherein said at least one

type of expected input variable is at least partially determined according to a simulation model of the DUT.

Claim 21. (Original) The method of claim 1, wherein at least one characteristic of said constraint determines whether said constraint conflicts with another constraint.

Claim 22. (Original) The method of claim 1, wherein the simulation model comprises a plurality of variables, wherein at least one scenario comprises a monitoring operation for monitoring behavior of the simulation model and wherein said monitoring operation comprises sampling at least one value of at least one variable of the simulation model.

Claim 23. (New) The method of claim 1, wherein the selecting at least one of said plurality of scenarios according to said at least one constraint is accomplished by automatically selecting a subset of said plurality of scenarios by resolving said constraints of said plurality of scenarios to include in the selected subset only non-conflicting scenarios.